

Notice of Allowability	Application No.	Applicant(s)	
	10/757,415	KANEKO ET AL.	
	Examiner	Art Unit	
	Ayal I. Sharon	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to After Final Amendment filed 7/20/07.
2. ☒ The allowed claim(s) is/are 1,4,5,8-10,13-15 and 18-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Introduction

1. Claims 1, 4-5, 8-10, 13-15, and 18-20 of U.S. Application 10/757,415, originally filed on 1/15/2004 are currently pending.
2. The application claims priority to Japanese Application P2003-344526, filed on 10/02/2003.

Drawings

3. Applicants' amended Figure 2, filed on 7/20/2007, is accepted. The objection to the drawing is withdrawn.

Examiner's Statement of Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance for claims 1, 4-5, 8-10, 13-15, and 18-20.
5. The prior art referred to in this Reasons for Allowance is as follows:
 - a. Kameda, Y. and S. Yorozu. "Automatic Josephson-Transmission-Line Routing for Single-Flux-Quantum Cell-Based Logic Units." IEEE Transactions on Applied Superconductivity. June 2003. Vol.13, Issue 2, pp. 519-522. ("Kameda").

- b. U.S. Patent 6,582,976 to Watanabe. Filed Feb. 14, 2002. (Henceforth referred to as "**Watanabe '976**").
- c. U.S. Patent 7,211,448 to Watanabe. Filed Feb. 14, 2002. (Henceforth referred to as "**Watanabe '448**").

Kameda Reference

- 6. Claim 8-10, 13-15, and 18-20 were allowed in the previous Office Action, in view of the Kameda reference.
- 7. Moreover, claim 2 was objected to as being dependent upon the rejected base claim, claim 1. The Examiner indicated as being allowable if rewritten in independent form.
- 8. The applicants have amended claim 1 to include the limitations of claims 2. Therefore, claim 1 is allowable in view of the Kameda reference, as its dependents claims 4 and 5. Applicants have cancelled dependent claims 2-3.
- 9. Therefore, all pending claims are allowable in view of the Kameda reference.

Watanabe References

- 10. In light of the After-Final Amendment, the Examiner conducted a further search, and located the Watanabe '976 and Watanabe '448 references.
- 11. The Watanabe references both teach the creation of a via hole in an aggregate of circuit patterns on a substrate, and "judg[ing] whether a state of the bottom of the via hole is accepted or rejected" (See Abstract, and Summary of the

Invention, of both references). Both references also teach the use of dummy wiring (See e.g., Watanabe '976, col.7, lines 20-30, and Fig.4, Item 5a).

12. While the Watanabe references both teach "judging whether a state of the bottom of the via hole is accepted or rejected" (See e.g., Watanabe '976, col.3, lines 47-50), and "judg[ing] whether the wiring line is exposed or not, by detecting a presence/absence of the boundary line on the bottom of the via hole" (See e.g., Watanabe '976, col.4, lines 11-13), neither expressly teaches the claimed limitation of "wherein said evaluating includes separately evaluating the aggregate of the simulation circuit patterns on each of the substrates." (Emphasis added), as claimed in the independent claims of the instant application.
13. Moreover, neither Watanabe reference, however, expressly teaches that the via hole is a "dummy via hole" as claimed in the independent claims of the instant application.
14. Independent claims 1, 8, 13, and 18 are therefore allowable in view of the Watanabe references.
15. The dependent claims are allowable because they depend from allowable independent claims.
16. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ayal I. Sharon whose telephone number is (571) 272-3714. The examiner can normally be reached on Monday through Thursday, and the first Friday of a biweek, 8:30 am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached at (571) 272-3753.

Any response to this office action should be faxed to (571) 273-8300, or mailed to:

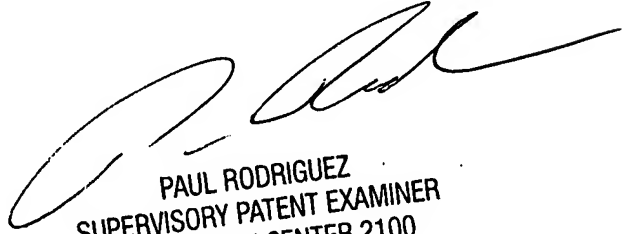
USPTO
P.O. Box 1450
Alexandria, VA 22313-1450

or hand carried to:

USPTO
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2100 Receptionist, whose telephone number is (571) 272-2100.

Ayal I. Sharon
Art Unit 2123
July 31, 2007



PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100